ity to use the inhaler in case of breathing difficulties, followed by features giving patients the reassurance about taken dose – precise dose counter and confirmation mechanism.

PMD58
COMPARISON OF THE IASP GRADING SYSTEM AND S-LANSS IN IDENTIFICATION OF NEUROPATHIC PAIN IN PATIENTS WITH CHRONIC LOW BACK PAIN
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OBJECTIVES: Prevalence of neuropathic pain in patients with chronic low back pain is high. Screening for neuropathic pain is important because pharmacological management differs from nociceptive pain. There are various methods to assess the neuropathic pain. However these methods have shown different sensitivity and specificity in identifying the neuropathic pain. Present study compared the IASP grading system and S-LANSS in identification of neuropathic pain in patients with chronic low back pain. **METHODS:** This is a prospective questionnaire based study where consecutive chronic low back patients attending pain clinic of public tertiary care teaching hospital was included for the study. Each patient was examined by the physician and graded according to the IASP grading system about the certainty of neuropathic pain. Later patients filled the S-LANSS Questionnaire. **RESULTS:** According to the IASP grading system, 45 patients (75%) classified as probable or definite neuropathic pain and 15 patients (25%) as unlikely neuropathic pain. According to the S-LANSS Questionnaire, 30 patients (50%) were classified as likely neuropathic pain and 30 patients (50%) as unlikely neuropathic pain. All patients who were classified as neuropathic pain according to S-LANSS questionnaire were also classified as definite or probable neuropathic pain by the IASP grading system. **CONCLUSIONS:** About 25% of neuropathic pain patients were not detected by S-LANSS. Self reported neuropathic pain assessment scale may miss patients with neuropathic pain.

PMD59
MEASURING FUNCTION IN COGNITIVE IMPAIRMENT: A SUGGESTED TAXONOMY FOR CHARACTERIZING ASSESSMENT INSTRUMENTS
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OBJECTIVES: Various assessment instruments are used for gathering data on different functional domains (i.e., mental), from various reporters (e.g., patient or observer). The objective of this study was to create an inventory of functional instruments used in patients with cognitive impairment and to categorize them using a taxonomy that combines several approaches: functional domain, data reporter, and performance versus opinion based. **METHODS:** A literature search was conducted using the following: English language, any date, "performance based measure", "performance measures", "performance tests", "cognitive function tests", "functional measures", "functional tests", "cognitive measures", "functional assessment", "cognitive impairment", "Alzheimer's disease". Three reviewers abstracted and evaluated retrieved studies to identify measure instruments and assign categories: 1. Addressing physical, mental, and/or social functioning; 2. Performance based (PerfO) or opinion based; and 3) Patient-reported (PRO), clinician-reported (ClinRO), or observer reported (ObsRO) outcome. Discrepancies among reviewers were decided through consensus. **RESULTS:** The literature search led to the identification of 212 measures used in cognitive impairment. Reviewers identified 134 as PerfOs. The remaining 78 opinion-based measures were categorized into PROs, ClinROs, and ObsROs. Overall, one, 17, and 152 measures assessed social, physical, and mental functioning, respectively. Forty-two measures assessed multiple domains. Within the 134 PerfOs, 13 were designed to assess physical, 109 mental, and one social functioning. Eleven included multiple functional domains. **CONCLUSIONS:** When measuring function in patients with cognitive impairment, it is important to recognize the wide range of instruments available and their characteristics. The taxonomy applied here, organizing functional-measure instruments used in cognitively impaired populations by various characteristics, is recommended as a starting point for characterizing tools. Researchers and clinicians can use such an approach to better understand the complexity of the measures as well as the strengths and limitations of these tools to guide them in selection and use, and interpretation of findings.

PMD60
PATIENT FACTORS IN THE DECISION TO DELAY TOTAL KNEE ARTHROPLASTY
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OBJECTIVES: Delaying a total knee arthroplasty (TKA) carries an increased likelihood of poor rehabilitation outcomes. TKA candidates may choose to delay surgery for a variety of reasons including perceptions of pain and interference with activities due to pain. This study explores patients' perspectives and factors related to the decision to delay a TKA procedure. **METHODS:** Cross-sectional online survey conducted among U.S. patients with arthritis who were candidates for TKA. Survey questions related to pain severity and activity interference due to pain were taken from the Brief Pain Inventory (BPI); additional questions were related to pain management, the decision to delay TKA surgery and demographic information. Data was analyzed using descriptive statistics and logistic regression using SAS 9.3. **RESULTS:** There were 654 respondents; mean age 64±7 years; 65.5% female; 62% with household income ≥$50,000; 55.4% with bachelor or graduate degree. Logistic regression showed that interference with work and concerns for pain (pain in the first 3 days or pain in the first several weeks following surgery) were significant in predicting the decision to delay knee replacement surgery. A one unit increase in the interference with work scale is associated with a 21.9% increase in the odds of delaying TKA surgery (95% CI: 1.095-1.356). Patients concerned about experiencing pain (first several weeks following surgery) had significantly higher odds of delaying surgery (OR: 1.64, 95% CI: 0.881-3.06). 92% of survey respondents indicated they would seek surgeons who offered an effective non-opiate pain management option during the rehabilitation period. Gender, income level, and education level were not significant factors in the decision to delay TKA surgery. **CONCLUSIONS:** In a relatively wealthy, well-educated US-based population, the decision to delay a TKA is significantly influenced by patient concerns about interference with work and experiencing pain following TKA. Non-opioid pain management is important in selecting a surgeon.

MEDICAL DEVICE/DIAGNOSTICS - Health Care Use & Policy Studies

PMD61
INCREASED RATES OF SELF MONITORING OF BLOOD GLUCOSE TRANSLATES TO BETTER MARGINAL EFFECTS ON HBA1C CONTROL
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OBJECTIVES: Despite numerous studies highlighting the importance of HbA1c control, literature quantifying the marginal effect of self-monitoring of blood glucose (SMBG) on HbA1c control is somewhat limited. Recognizing this knowledge gap, this study assessed the association between increased use of testing strips and glycemic control, taking into account insulin regimen, type I/II status, and other patient-level characteristics. **METHODS:** Patient inclusion and exclusion criteria were adapted from HEDIS Comprehensive Diabetes Care guidelines. Commercially enrolled patients on insulin regimen (basal, bolus, or pre-mixed) with at least one diabetic strip fill between the ages of 18 to 75 years were identified from the HealthCore Integrated Research Database®. Continuous enrollment for 12 months pre/post the earliest testing strip fill ('index') was required. Clinical outcome was defined as most current HbA1c lab value within 1 year post-index period. Using average marginal effects (AME) analysis with bootstrapping, we estimated the likelihood of patient's control (HbA1c < 8.0%) as number of testing strip fills increased, adjusting for age, gender, insulin regimen, and other variables. **RESULTS:** Within this population, 45.8% of patients were unable to achieve control rates of <8% during the study period. However, patients with higher fill rates (>=4 fills) were more likely to achieve control (60.9%) relative to a 44.0% control rate among those with low fill rates (< 4 fills). Using the AME analysis, each increase in fills was associated with a 2.5% increase in achieving control (AME: 2.5%, 95% C.I.: 2.1% - 2.8%, p<.001). The marginal effect between strip fills and HbA1c control was greater among type I patients (AME: 3.5%, 95% C.I.: 2.5% – 3.5%, p<.001). **CONCLUSIONS:** We found a statistically significant AME between testing strip fills and glucose control. These findings highlight the importance of efforts to encourage better SMBG among patients on insulin, with implications for improved patient outcomes and long term cost savings.

PMD62
USER EXPERIENCE A NOVEL, BUT CRITICAL ELEMENT IN PAYER AND PURCHASER VALUE ANALYSIS OF MEDICAL TECHNOLOGIES
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OBJECTIVES: Healthcare in the US is being reimagined to deliver technology enabled, high quality, cost-effective care. User experience (UX) drives clinician preferences and outcomes, while both clinical and economic impact drives payer/purchaser preferences. Elements of user experience include ease of use, reproducibility of results, and ability to easily and effectively understand directions and interfaces. All of which impact safety, reliability, and reproducibility- metrics important to payers. **METHODS:** Data from 5 payer/purchaser studies of medical devices were reviewed to characterize the intersection of value drivers and impact variables. Expert evaluation techniques (Zhang 2003) were applied to identify key features that have an effect on both usability and predicted value. **RESULTS:** Across studies, the usability of devices were tied to factors that impact clinical or cost-outcomes, but are not considered by payers and other purchasing groups routinely. Specifically, physician and patient preferences on usability criteria impacts error rates, procedure time, patient satisfaction, and adherence. **CONCLUSIONS:** User experience criteria need to be embedded within value analyses by payers and purchasers to ensure technology innovations are optimized to deliver value along clinical and cost dimensions. This evaluation dimension helps further align coverage and purchasing decisions with quality incentives.

PMD63
A FRAMEWORK FOR COVERAGE DECISIONS FOR DIGITAL HEALTH TECHNOLOGIES
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OBJECTIVES: Digital health solutions are an emerging trend in healthcare delivery, with over $3 Billion dollars being invested in the space in the first three quarters of 2014 alone, surpassing total medical device venture funding and representing 100% YoY growth. Healthcare, technology, and industry stakeholders are collaborating to develop tools that provide near patient monitoring, engagement, and interaction with providers with the expectation that these technologies will improve care and potentially decrease costs. However, little work has been done to develop methods to evaluate digital health solutions for payers and HTA decision-makers. The objective of this study was to determine the framework with which US payers will make coverage decisions for digital health technologies. **METHODS:** In-depth interviews were conducted with 15 US payer and HTA decision-makers to determine preferences for evaluation frameworks for digital health technologies, drivers of value, evidence requirements, and economic impact expectations. **RESULTS:** Most payers reported that they were currently experimenting with digital health technologies